SEIZURE DISORDERS

Seizure is the physical findings or changes in behavior that occur after a sudden, brief episode of abnormal electrical activity in the brain. Less commonly seizures are caused by chemical imbalances, infection, injury or sudden change in vascular perfusion (such as with a cardiac arrhythmia) which effect neurological activity or from psychological effects.

There are many different types of seizures. Some have mild symptoms without shaking, which may manifest as mild involuntary movement, muscle spasm, mental confusion or staring episodes. While there are many types of seizures there are a few main categories

Focal (or partial) seizures occur when seizure activity is limited to a part of one brain hemisphere. There is a site, or a focus, in the brain where the seizure begins. There are two types of focal seizures which include focal seizure with retained awareness and focal seizure with loss of awareness.

Generalized seizures occur when there is widespread seizure activity in the left and right hemispheres of the brain. The different types of generalized seizures include absence seizures (formerly known as petit mal) which include brief staring episodes; tonic-clonic or convulsive seizures (formerly known as grand mal) where muscles contract and relax repeatedly and a person's body shakes uncontrollably; Atonic seizures are also referred to as drop attacks which is characterized by a sudden loss of consciousness and sudden dropping to the floor; Clonic seizures which are similar to tonic-clonic, with involuntary movement, but may be less symmetrical; Tonic seizures are characterized by facial and truncal muscle spasms, flexion or extension of the upper and lower extremities, and impaired consciousness. Several types of tonic seizures exist. Those grouped with absence, myoclonic, and atonic seizures are non-convulsive and tend to be brief; Myoclonic seizures can occur as a single event or in series, where unconsciousness and memory are not impaired. A myoclonic seizure may cause a child to spill or drop what s/he is holding, or to fall from his/her chair. Myoclonic seizures should not be confused with tics or "startle" responses. Psychogenic non-epileptic (PNES) seizures are not due to epilepsy but may look very similar to an epilepsy seizure. Individuals with epilepsy may experience PNES and it may be difficult to differentiate between psychogenic non-epileptic seizures and epilepsy seizures.

For students who have diagnosed seizure disorders with specific treatment protocols that deviate from standard response or standard first aid/CPR. An Individual Health Protocol will be implemented in collaboration with the student's parents and neurologist. Examples of this include severe intractable seizure disorders, or students with emergency medication or magnets, for example. Staff will receive Health Status Notifications on students with diagnosed seizure histories. Delegated staff will be trained is individual protocols.

STANDARD SEIZURE RESPONSE

IF FALLING/GENERALIZED/JERKING:

1. Assist student to floor, turn to side (preferably the left side).
2. Loosen clothing at neck and waist; remove eyeglasses (if applicable); protect head with arms, lap, cushioning material. Clear away furniture and other objects from area.

IF SEIZURE OF ANY TYPE OCCURS:

3. Have another classroom adult remove/direct students from area.
4. **TIME THE LENGTH OF THE SEIZURE**
5. Allow seizure to run its course; **DO NOT** restrain or insert anything into student's mouth. **DO NOT** try to stop purposeless behavior.
6. During a general (grand mal) seizure expect to see pale or bluish discoloration of the skin/lips. Expect to hear noisy breathing.
7. Remain calm.

IF COMPLEX PARTIAL SEIZURES (BEHAVIOR OUTBURSTS, LIP SMACKING, HEAD JERKING OR OTHER REPETITIVE MOTIONS THAT DO NOT IMPAIR CONSCIOUSNESS) OR ABSENCE SEIZURES (BRIEF STARING EPISODES) OCCUR:

1. **Time the length of the seizure.**
2. Assist student to comfortable position; speak gently and reassuringly to student.
3. Reassure other students in the area as needed. Avoid referring to student's having a spell.
4. Protect from injury by guiding away from hazards back to appropriate space.
5. Do not restrain student; avoid touching student (unless safety is compromised).
6. Stay back from student acting angry or aggressive.

IF STUDENT EXHIBITS:

- **Any seizure that presents differently than what is typical for the student**
- **Seizure lasts 5 minutes or greater or consecutive seizures last 5 minutes or greater.**
- **Two or more seizures occur without a period of consciousness.**
- **Respiratory distress**
- **Persistent cyanosis (blueness)**

1. Delegate call to EMS (9-1-1)
2. Initiate CPR for absent breathing or pulse**.**

WHEN SEIZURE COMPLETED:

1. If EMS is on site, defer care to EMS.
2. Dismiss student as needed.

3. If parents or EMS are not onsite:
   Reorient and reassure student, it is common for individuals to be disoriented following a seizure.
   a. allow/assist change into clean clothing if necessary.
   b. Allow student to sleep, as desired, after seizure.
4. A student recovering from a generalized seizure may manifest abnormal behavior such as incoherent speech, extreme restlessness, and confusion. This may last from five minutes to hours. The student is not responsible for his/her behavior during this period, and disciplining him/her is useless.
   a. If as student does not return to baseline behavior after 30 minutes, student should be dismissed with parent.

FOLLOW UP

- Always notify nurse of incident.
- Complete required documentation

Response Plan adapted from:
Providence Pediatric Neurology School Seizure Protocol (2018)
Multnomah Education Service Districts Individual Seizure Action Plan (2015)

References:
Epilepsy Foundation of Western/Central Pennsylvania: Epilepsy and Learning. (2016). Retrieved from http://www.efwp.org/programs/ProgramsPSALearning.xml
Halton District School Board. (2009). Epilepsy & Seizure Disorder Management Protocol. Retrieved from http://www.hdsb.ca/ParentInfo/Health%20Protocols/SeizureDisorderProtocol209.pdf